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COVER FOR FOOD CONTAINER
[Deckel für einen Lebensmittelbehälter]

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Description

The present invention relates to a cover for closing a food container, particularly for ready-made and instant soups, with at least one cover label applied to the cover, which is connected in at least one adhesive area to the cover, and with at least one ventilation opening, which is covered by the cover label, and which can be uncovered by the at least partial pulling off of the cover label.

A cover with ventilation openings that are closed by a cover label, and can be uncovered, is known, for example, from DE 80 31 412.1 U1. This cover is part of a packaging for frozen meals, and provides a tight seal for the food container that contains the frozen meal due to the fact that the cover is rolled up over a marginal flange of the container. The cover label is a self-adhesive label that is glued over the entire surface of the cover and covers the ventilation openings. Before heating the frozen meal, the ventilation openings are uncovered by pulling off the cover label, so that vapors produced during heating can escape.

If, in the case of the packaging of DE 80 31 412.1 U1, one forgets to pull off the cover label before heating the frozen meal, then excess pressure develops in the container due to the air that expands during the heating and the vapor formation. In the case of a thin cover label according to the teaching of DE 80 31 412.1 U1, the excess pressure can tear the cover label above the ventilation opening. The vapor then escapes through this hole at high pressure, in a jet that can lead to combustions. In the case of a more rigid cover label, the excess pressure in the interior of the container leads to the cover together with the cover label bursting away from the container. The deep freeze container is then open over a large surface; the vapor is not retained in the container during the heating and it escapes, leading to the meal drying. In addition, there is a risk that portions of the meal that boil up during the heating soil the environment when the cover is not on.

The invention is based on the problem of preventing these disadvantages.

This problem is solved in a simple way according to the invention with a cover of the type mentioned in the introduction by arranging the ventilation opening in a substantially connection-free area outside of the adhesive area, where the essentially connection-free area extends completely from the ventilation opening to the margin of the cover label.

This solution has the advantage that the excess pressure that is generated during the heating of the container contents or during the filling of hot water into the container, can be led out to the margin of the cover label, through the ventilation openings and through the connection-free area, in which the cover label and the cover are not, or at least not continuously, connected to each other. The cover label acts as a kind of valve. Thus, during the generation of excess pressure in the interior of the container, the cover cannot be blown away and the cover label cannot tear. The disadvantages known from DE 80 31 412.1 U1 do not occur with the cover according to the invention.

In a preferred, advantageous embodiment, the cover label can be designed as a self-adhesive label that is coated at least in sections with adhesive. With self-adhesive labels it is possible to cost effectively manufacture even complicated shapes and glue them, irrespective of the shape, to the cover. In the case of a self-adhesive label, the adhesive area is formed from the area that is coated with adhesive. The adhesive can be designed as a pressure contact adhesive glue that can either be detached again or not, and that binds the self-adhesive label by pressure to the cover.

In an additional embodiment, the cover label can be manufactured from cardboard. Pressure labels in the form of cardboard disks are cost effective. In addition, the cardboard is bending resistant, and it can be pulled off easily as a whole from the cover.

An additional disadvantage of the known cover results precisely in the use of an adhesive-coated label or a self-adhesive label, when they present areas that adhere above the ventilation opening. If this self-adhesive label is exposed to soiling particles or germs before being glued to the cover, they keep

adhering to the adhesive surface of the label. If the areas of the label to which such soiling particles or germs adhere come to be positioned above the ventilation openings, then the food contained in the food container can become contaminated. With such labels costly hygienic measures are necessary if only for reasons pertaining to food law.

In addition, it is precisely with powdered or granular ready-made and instant meals, such as ready-made or instant soups, that the granulate or powder adheres to the self adhesive label above the openings, which gives the end user a poor impression with regard to the hygienic properties of the packaging.

To prevent these disadvantages, in a particularly advantageous embodiment, the areas of the self-adhesive label are not adhesive above the ventilation openings. In this design, no germs or powder and granule grains can adhere to the label. This non-adhesive, connection-free area can be produced by the application of a cover film on the adhesive layer or by an adhesive-free area.

If in an additional advantageous embodiment the ventilation opening is formed in a marginal area of the cover, then the ventilation opening can be used after heating or pouring the ready-made or instant soup as a spout for the ready-made soup, without having to remove the cover.

Here, in an additional advantageous embodiment, a second ventilation opening can also be provided, which is formed in a marginal area of the cover that substantially faces the first ventilation opening. In this way, the pouring of the ready-made soup or of the powder through the ventilation opening is facilitated, while the cover is closed, because, during the pouring, air can penetrate into the facing opening and allow a more regular pouring. Because the two ventilation openings face each other, one ensures in a simple way that, during the pouring, the second ventilation opening is not located in the area of the liquid or the powder. Naturally, it is not absolutely necessary that they face each other, provided that a sufficient separation between the two ventilation openings is ensured.

In an additional advantageous embodiment, at least two ventilation openings can be arranged in a marginal area of the cover, next to each other, along the cover margin. Several small ventilation openings, instead of one large ventilation opening, have the advantage that the strips located between the ventilation openings stabilize the cover and the cover label, and protect against tearing during mechanical stressing. Here it can be advantageous for the strips between the ventilation openings to be located outside of the adhesive area, because, when the cover is pulled off, the strips can easily tear, due to their low mechanical resistance.

To facilitate the uncovering of the ventilation opening and to prevent an uncontrolled course of the tear in the cover label, the cover label can be provided, in an additional embodiment, with at least one weakened line. A weakened line here denotes a substantially linear area of the cover label that presents a lower mechanical resistance in comparison to the surrounding areas. This weakened line can be produced by chemical, thermal or mechanical treatment. As a result of the lowered mechanical loadability of the weakened line in comparison to the surrounding areas, the cover label tears preferentially along the weakened line, so that the ventilation opening can be uncovered in a controlled way, without uncontrolled tearing of the cover label at other places.

To achieve a controlled and simple uncovering of the ventilation opening, one can, in an additional advantageous embodiment, have the weakened line follow substantially the course of a margin of the adhesive area. Here, it is advantageous for the course of the weakened line to be located substantially outside of the adhesive area. Because, at the boundary with the adhesive area, the largest tensions develop in the cover label when the cover label is pulled open, the effect of the weakened line can thus be supported again, and the course of the tearing can be controlled even better.

A visually more pleasing effect, which the final consumer interprets as a user friendly solution, is achieved if, in an additional advantageous embodiment, a pull-off area is formed in the cover label,

which can be either separated completely from the cover label, or which can be flipped away as a coherent area, uncovering the ventilation opening. This pull-off area can be delimited at least in sections by the weakened line. Other sections of the pull-off area can be formed by the margin of the cover label or by the cover label itself, where, in the latter case, the pull-off areas can be flipped upward.

In an additional advantageous embodiment, the pull-off area can here be designed to be substantially strip-shaped, and to be delimited at two sides by weakened lines. In this case, the weakened lines are substantially straight and thus easy to produce. The strip-shaped pull-off area is easy to pull off, without any risk of uncontrolled tearing of the cover label.

A particularly cost effective manufacture of the weakened line provides for the weakened line to be provided as a perforated line, in an additional advantageous embodiment, along which the material of the cover label is perforated, where short perforated sections alternate with bars. This perforation line also comprises microperforations, in which the perforated sections have dimensions in the range of fractions of a millimeter. The smaller the perforations are, the lower the risk is of powder or fluid being able to exit through the perforation. The perforation also does not have to extend throughout the material, rather it can leave a small residual section at the bottom of the perforation, so that the seal of the perforation line is ensured.

The pulling-off of the cover label can be substantially facilitated, in an additional advantageous embodiment, if the closure label is provided with a gripping tab outside of the adhesive area. On this gripping tab, which protrudes preferably over the margin of the cover label, the margin of the cover, or out of the plane of the cover, the cover label can be gripped to uncover the ventilation openings. In an additional advantageous embodiment, the gripping tab can be associated with the pull-off area, i.e., it can be a part of the pull-off area.

The covers according to the invention can be made of paper, cardboard, plastic or aluminum. Covers made of a bending resistant material, such as, cardboard, can be attached particularly by means of separate glue points to the cover, and then pulled off as a whole from the cover.

The invention also relates to a construction kit which encloses the food container and the cover that closes the food container according to one of the above embodiments.

Below, the invention is described with the help of an embodiment example in reference to a drawing.

In the drawings:

Figure 1 shows a perspective view of a cover according to the invention with a cover label in a view at a angle from above;

First, the structure of the cover is described with the help of Figure 1.

Figure 1 shows a substantially circular cover 1, with a substantially disk shaped and flat top side, to which a circular self-adhesive label 2 is glued. The self-adhesive label is provided in two adhesive areas 4 with an adhesive layer, for example, a layer made of a pressure-adhesion adhesive, and connected to the cover 1 in these areas. The adhesive areas 4 each present the shape of a sector. This sector extends from the margin of the cover label to a rectilinear, radius-parallel delimitation 5 of the adhesive area.

Between the two sector-shaped adhesive areas 4, a strip-shaped, non-adhesive zone is located, respectively a connection-free area 6 of the self-adhesive label 2, which is delimited by the radius-parallel margins 5 of the two adhesive areas 4 and the margin of the cover label. A non-adhesive zone 6 can be formed, for example, from a cover of the adhesive layer of the self-adhesive label by means of a film or by means of an adhesive-free zone. In the embodiment example of Figure 1, the non-adhesive zone 6 is formed as an adhesive-free zone, in which the adhesive layer of the self-adhesive label is removed and extends continuously from cover margin to cover margin.

Within the adhesive free zone 6, in the marginal area of the cover 1, continuous ventilation openings 7 are arranged in such a way that they are located completely within the connection-free area 6. The margin of the ventilation opening 7, which is located outside in the radial direction, is close to the inner wall of the food container, which is not shown.

In the embodiment example of Figure 1, the cover 1 is provided with a total of six ventilation openings 7, where in each case three ventilation openings 7 are located next to each other and form two groups of ventilation openings, which are located diametrically opposite on the cover.

In parallel to the straight section of the margin 5 of the adhesive area, inside the adhesive-free zone area 6, at a small distance from the rectilinear boundary 5 of the adhesive area, two weakened lines 9a and 9b extend, in which the mechanical resistance of the cover label 2 is lowered compared to the abutting areas. The weakened lines 9a and 9b can, in a variant of the embodiment example that is not shown, also follow the rectilinear boundary 5 of the adhesive area 4 within the adhesive area 4.

The weakened lines 9a and 9b are designed as microperforation lines in the embodiment example of Figure 1, but they can also be designed as chemically or mechanically preweakened, or linear prestamped, areas.

The two weakened lines 9a and 9b delimit a pull-off area 10, which is arranged within the adhesive-free area 6. The two pull-off areas 10, which are located at ends in the radial direction, are formed from the margin of the cover label 1. In the embodiment example of Figure 1, a gripping tab 11 is attached at one end of the pull-off area 10. In a variant of the cover label 2, gripping tabs can be attached at both ends of the pull-off area 10.

To stabilize the cover, a seam 12 is included by molding, which is concentric with respect to the cover margin. This groove 12 is covered completely by the cover label 2.

In Figure 1, a part of the cover area 10 is torn at the weakened lines 9a and 9b, and flipped up in the illustration. In this position of the pull-off area, a group of ventilation openings 7 is uncovered.

Starting from the embodiment example of the cover according to the invention, as represented in Figure 1, the principle according to the invention can be applied without problem to other variants. Thus, the cover 1 can have any other shape instead of a circular shape. The shape of the cover label 2 is not connected with the shape of the cover 1.

The number and shape of the ventilation opening 7 as well as their position can also be freely chosen. Instead of diametrically facing ventilation openings 7, the separation between the ventilation opening 7 can be so large in other cover shapes 1 that one ventilation opening 7 serves as spout and another ventilation opening 7 as air inlet. It is only essential that the ventilation openings 7 are arranged in such a way that in spite of the covering by the cover labels, an excess pressure can escape out of the interior of the container, without tearing the cover label or bursting out from the cover. This principle is not limited to self-adhesive labels made of plastic, paper or aluminum, rather it can also be used in the case of cover labels that are welded to the cover, for example, by ultrasound, or connected by means of a separately applied adhesive layer. The cover label can also be manufactured from a bending resistant material, for example, cardboard, which is then glued at points to the cover, where care must be taken again to ensure that there is a continuously nonglued area between the ventilation opening and the margin of the cover label. The cover label should be attached by gluing in such a way that it can be detached easily from the cover.

The invention is not limited to an embodiment example in which the weakened lines 9a and 9b, as shown in Figure 1, run continuously from one end of the cover label 2 to the other. Alternatively, it is possible, for example, to provide only one weakened line, which runs in a straight or curved pattern from cover label margin to cover label margin about a ventilation opening, and defines a tab-shaped

pull-off area. In addition, the weakened lines 9a and 9b can end in the cover label 2, so that the pull-off area 10 cannot be removed completely, but has to be flipped up as a whole. The same effect can also be achieved by any curvature or any other pattern of one or more weakened lines.

Below, the use and the functioning of the embodiment example of Figure 1 are explained.

To prepare the soup, the cover 1 of the food container with soup granulate is removed, and hot water is poured into the food container. The preparation of the soup is then completed.

For the ready-made soup to stay hot for a longer time and be transported without spilling, it is recommended to put the cover back after hot water has been poured into the food container. However, in the process, due to the evaporation of liquid inside the container, an excess pressure is built up. To allow this excess pressure to be reduced, the ventilation opening 7 should be uncovered.

For this purpose, the pull-off area 10 is gripped at a gripping tab 11, and the gripping tab 11 is pulled up, away from the food container. As a result, the cover label 2 tears along the weakened lines 9a and 9b, the pull-off area 10 can be pulled off in strips, uncovering the ventilation openings again. Alternatively, as shown in Figure 1, only a part of the pull-off area 10 can also be pulled off, and thus only one group of ventilation openings 7 is uncovered.

If desired, the soup whose preparation is now complete can be poured through the ventilation opening 7 into another container, for example, into a plate or a cup. In this case, the size of the ventilation openings should be chosen so that the components of the food or soup contained in the container, for example, noodle soup, fit through the ventilation openings. The ventilation openings 7, however, can also be used to pour the content of the food container for preparation into another container.

If the user forgets to uncover the ventilation opening 7 by pulling off the pull-off area, then, according to the invention, the vapor can also escape without the cover 2 falling off and without the

cover label 2 tearing. The cover label 2 which is stretched only over the ventilation openings, without being connected to the cover 1 around the ventilation openings, leaves a path to the outside for the excess pressure in the food container. In the embodiment example, the air can escape along the strip-shaped, connection-free area 6 between the cover 1 and the cover label 2 out of the interior of the container. As a result, a pressure equilibration takes place in spite of the covered ventilation openings 7. The cover 1 can in this case still be removed, without any risk of the hot content of the food container injuring the user as it flows out during the opening of the cover due to the excess pressure.

Claims

1. Cover for closing a food container, particularly for ready-made and instant soups, with at least one cover element that is applied to the cover, which element is connected at least in an adhesive area with the cover, and with at least one ventilation opening, which is covered by the cover label and can be uncovered by the at least partial pulling off of the cover label, characterized in that the ventilation opening (7) is arranged in a substantially connection-free area outside of the adhesive area (4), where the substantially connection-free area extends continuously from the ventilation opening (7) to the margin of the cover label (2).

2. Cover according to Claim 1, characterized in that the cover label (2) is designed at least in sections as an adhesive-coated self-adhesive label (2).

3. Cover according to Claim 1, characterized in that the cover label (2) is formed as a cardboard that is coated at least in sections with adhesive.

4. Cover according to Claim 2 or 3, characterized in that the area of the cover label (2) that is located above the ventilation opening (7) is not adhesive.

5. Cover according to one of Claims 2-4, characterized in that the area of the self-adhesive label (2) that is located above the ventilation opening (7) is substantially free of adhesive.

6. Cover according to one of the above-mentioned claims, characterized in that the cover label is glued at points to the cover.

7. Cover according to one of the above-mentioned claims, characterized in that the ventilation opening (7) is formed in a marginal area (8) of the cover (1).

8. Cover according to Claim 7, characterized in that a second ventilation opening (7) is provided, which is produced in a marginal area of the cover that substantially faces the first ventilation opening.

9. Cover according to one of the above-mentioned claims, characterized in that at least two ventilation openings (7) are arranged next to each other in a marginal area (8) of the cover (1) along the cover margin (8).

10. Cover according to one of the above-mentioned claims, characterized in that the cover label (2) is tearable, with at least one weakened line (9a, 9b) along the cover label (2), to uncover the ventilation opening (7).

11. Cover according to Claim 10, characterized in that the weakened line (9a, 9b) follows substantially the course of a margin (5) of the adhesive area.

12. Cover according to Claim 10 or 11, characterized in that the weakened line (9a, 9b) extends to the margin of the cover label (2).

13. Cover according to one of Claims 10-12, characterized in that a pull-off area which can be detached from the cover label (2) at least in sections to uncover the ventilation opening (7), and which is located above the ventilation opening (7), is delimited at least in sections from the weakened line (9a, 9b).

14. Cover according to Claim 13, characterized in that the pull-off area (10) is designed substantially strip-shaped, and it is delimited on two sides by weakened lines (9a, 9b).

15. Cover according to one of Claims 10-14, characterized in that the weakened line (9a, 9b) is designed as a perforation line.

16. Cover according to one of the above-mentioned claims, characterized in that the closing label (2) is provided with a gripping tab (11) outside of the adhesive area (4).

17. Cover according to Claim 16, characterized in that the gripping tab (11) is associated with the pull-off area (10).

18. Cover according to one of the above-mentioned claims, characterized in that the cover (1) is manufactured from a plastic.

19. Cover according to one of the above-mentioned claims, characterized in that the cover (1) is manufactured from a cardboard.

20. Cover according to one of the above-mentioned claims, characterized in that the cover (1) is manufactured from paper.

21. Attachment for receiving ready-made and instant soups, comprising a food container and a cover that closes the food container, characterized in that the cover (1) is designed according to one of Claims 1-14.

